Pupil Notes: 3D CAD

⚙ Look at the examples of products your teacher has given you Talk about what they are for and why they work well. Your teacher can help you make a plan for your product.

⚙ Use 3D CAD software to design your product.

⚙ Use the measurements on your plan when drawing the shapes for your product design.

⚙ Try out different colours. Decide which looks best for your design.

⚙ Save your design, using a filename that will help you and others know what it is.

⚙ Ask a classmate to look at your design. Talk about what works well and what you could improve.

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Pupil Notes: 3D CAD

⚙ Look at the examples of products your teacher has given you and/ or suggest some of your own. Talk about what they are for and why they work well.

⚙ Create a plan for your design. Think about who it is for (audience), and what it should do (purpose).

⚙ Use the 3D CAD software tools and features to try different ways of presenting your design.

⚙ When you are happy with your design, apply colour and use the rendering tools.

⚙ Add notes to your design to explain the features of your product.

⚙ Save your design, using a filename that will help you and others know what it is.

⚙ Ask a classmate to look at your design. Talk about what works well and what you could improve.

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Pupil Notes: 3D CAD

⚙ Find and review examples of design solutions. Identify the key characteristics that make them effective. Make a note of this research in your project diary.

⚙ Make a plan for your product design, including relevant details such as size, materials, functions and component pieces.

⚙ Think about the audience and purpose at all times while planning your product design.

⚙ Use the 3D CAD software to draw your design, based on your plan.

⚙ Once you have drawn the basic structure of your design, experiment with the range of software features and tools to create your desired effect.

⚙ Annotate your design to include details that the person making your product will find useful.

⚙ Review your design with a classmate and check that everything is how you had intended. Make any changes that will improve your end product.

⚙ Save your finished design with a relevant filename.

⚙ Refer back to your research notes in your project diary. Make a note of at least two key characteristics that make your finished design effective for its intended audience and purpose.

⚙ Consider which aspects or characteristics of your design you would improve, if you were designing the product again. Record your ideas in your project diary.

⚙ Take a screenshot of your file, open in the software you used to create it (native file format). Place this at the end of your project diary.

Pupil Notes: 3D CAD

⚙ Find and review examples of design solutions. Identify the key characteristics that make them effective. Decide which of these characteristics are relevant to your project. Justify why you intend to incorporate them into your design. Make a note of this justification in your project diary.

⚙ While planning your design consider the needs of your specific audience and note these in your project diary as objectives for your final product. Refer back to your notes during the design process to ensure that you are meeting these objectives.

⚙ Make a detailed plan for your product, including relevant details such as size, materials, functions and component pieces. Use 3D CAD language to support your planning.

⚙ Think about the audience and purpose at all times while planning your product.

⚙ Produce and save a working drawing (orthographic drawing) showing three views of your design. Include dimensions on each view, so that a manufacturer could make a prototype of your design from your drawings.

⚙ Experiment with the range of 3D CAD software tools and features to draw your design, based on your planning and initial research. When creating your final rendered design, make sure that you have drawn at least two of the component parts yourself.

⚙ Make sure the files you used to make your design are tidy. Delete any large files you no longer need. Save your work at key points and make a copy to avoid losing successful versions.

⚙ Review your design with a classmate. Make a note in your project diary of any areas that you could develop further. Make changes as appropriate. Repeat this review process until your finished design is as close to your original intention as possible, taking into account your objectives.

⚙ Save your design using relevant filenames and export it in formats that others will be able to view.

⚙ Once you have completed your design, make notes in your project diary to justify how your design meets your original objectives. Make specific reference to your audience and purpose. Record any objectives that your design does not fully meet.

⚙ Take a screenshot of your file, open in the software you used to create it (native file format). Place this at the end of your project diary.